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- (c) *Uses*. The product is used as a humectant and plasticizer in preparation of soft-moist dog and cat foods.
- (d) *Limitations*. The product is preferably stored in a closed, stainless steel or aluminum container. The level of use of the product shall not exceed 15 percent of the total weight of the pet food formulation.
- (e) *Labeling*. The labeling shall bear, in addition to other information required by the Act:
 - (1) The name of the additive.
- (2) Adequate directions for use in accordance with the provisions in paragraph (d) of this section.

[45 FR 22920, Apr. 4, 1980]

§ 573.540 Hydrolyzed leather meal.

- (a) *Identity*. Hydrolyzed leather meal is produced from leather scraps that are treated with steam for not less than 33 minutes at a pressure of not less than 125 pounds per square inch.
- (b) *Specifications*. The additive shall conform to the following percent-by-weight specifications:

Moisture, not less than 5 percent nor more than 10 percent.

Crude protein, not less than 60 percent. Crude fat, not less than 5 percent. Crude fiber, not more than 6 percent. Chromium, not more than 2.75 percent.

- (c) *Use.* It is used or intended for use as a source of protein in swine feeds in an amount not to exceed 1.0 percent by weight of the finished feed.
- (d) *Labeling*. The labels and labeling shall bear, in addition to the other information required by the Act:
- (1) The name of the additive, hydrolyzed leather meal.
- (2) Adequate directions to provide finished feeds complying with paragraph (c) of this section.

§ 573.560 Iron ammonium citrate.

Iron ammonium citrate may be safely used in animal feed in accordance with the following prescribed conditions:

- (a) The additive is the chemical green ferric ammonium citrate.
- (b) The additive is used or intended for use as an anticaking agent in salt for animal consumption so that the level of iron ammonium citrate does

not exceed 25 parts per million (0.0025 percent) in the finished salt.

- (c) To assure safe use of the additive the label or labeling of the additive shall bear, in addition to the other information required by the Act:
 - (1) The name of the additive.
- (2) Adequate directions to provide a final product that complies with the limitations prescribed in paragraph (b) of this section.

$\S 573.580$ Iron-choline citrate complex.

Iron-choline citrate complex made by reacting approximately equimolecular quantities of ferric hydroxide, choline, and citric acid may be safely used as a source of iron in animal feed.

§ 573.600 Lignin sulfonates.

Lignin sulfonates may be safely used in animal feeds in accordance with the following prescribed conditions:

- (a) For the purpose of this section, the food additive is either one, or a combination of, the ammonium, calcium, magnesium, or sodium salts of the extract of spent sulfite liquor derived from the sulfite digestion of wood or of abaca (Musa textilis) or of sisal (Agave sisalana) in either a liquid form (moisture not to exceed 50 percent by weight) or dry form (moisture not to exceed 6 percent by weight).
- (b) It is used or intended for use in an amount calculated on a dry weight basis, as follows:
- (1) As a pelleting aid in the liquid or dry form in an amount not to exceed 4 percent of the finished pellets.
- (2) As a binding aid in the liquid form in the flaking of feed grains in an amount not to exceed 4 percent of the flaked grain.
- (3) As a surfactant in molasses used in feeds, as liquid lignin sulfonate, in an amount not to exceed 11 percent of the molasses.
- (4) As a source of metabolizable energy, in the liquid or dry form, in an amount not to exceed 4 percent of the finished feed.

§ 573.620 Menadione dimethylpyrimidinol bisulfite.

The food additive, menadione dimethylpyrimidinol bisulfite, may be safely used in accordance with the following conditions:

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- (a) The additive is the 2-hydroxy-4,6-dimethylpyrimidinol salt of menadione ($C_{17}H_{18}O_6N_2S$).
- (b) The additive is used or intended for use as a nutritional supplement for the prevention of vitamin K deficiency as follows:
- (1) In chicken and turkey feed at a level not to exceed 2 grams per ton of complete feed.
- (2) In the feed of growing and finishing swine at a level not to exceed 10 grams per ton of feed.
- (c) To assure safe use, the label and labeling of the additive shall bear adequate directions for use.

§ 573.625 Menadione nicotinamide bisulfite.

The food additive may be safely used as follows:

- (a) The additive is 1,2,3,4-tetrahydro-2-methyl-1,4-dioxo-2-naphthalene sulfonic acid with 3-pyridine carboxylic acid amine (CAS No. 73581–79–0).
- (b) The additive is used or intended for use as a nutritional supplement for both the prevention of vitamin K deficiency and as a source of supplemental niacin as follows:
- (1) In chicken and turkey feeds at a level not to exceed 2 grams per ton of complete feed.
- (2) In growing and finishing swine feeds at a level not to exceed 10 grams per ton of complete feed.
- (c) To assure safe use, the label and labeling of the additive shall bear adequate directions for use.

[64 FR 46840, Aug. 27, 1999]

§ 573.637 Methyl esters of conjugated linoleic acid (cis-9, trans-11 and trans-10, cis-12-octadecadienoic acids).

The food additive, methyl esters of conjugated linoleic acid (cis-9, trans-11 and trans-10, cis-12 octadecadienoic acids), may be safely used in swine feed in accordance with the prescribed conditions:

(a) The food additive is manufactured by the reaction of refined sunflower oil with methanol to produce fatty acid methyl esters, which then undergo conjugation to yield methyl esters of octadecadienoic acid. The additive consists of not less than 28 percent methyl ester of cis-9, trans-11-octadecadienoic acid, and not less than 28 percent methyl ester of trans-10, cis-12-octadecadienoic acid with the sum of the other methyl esters of octadecadienoic acid not to exceed 4 percent. The additive shall contain not less than 35 percent of other fatty acid esters composed of oleic acid, palmitic acid, stearic acid, linoleic acid, and other associated acid esters

- (b) The additive is used or intended for use in the feed of growing and finishing swine as a source of fatty acids at levels not to exceed 0.6% in the finished feed.
- (c) The additive meets the following specifications:
- (1) Free methyl alcohol not to exceed 0.015%.
- (2) Insoluble impurities not to exceed 0.1%.
 - (3) Moisture not to exceed 0.5%.
- (4) Unsaponifiable matter not to exceed 1.0%.
- (d) To assure safe use of the additive, in addition to the other information required by the act:
- (1) The label and labeling of the additive and any feed premix shall bear the following:
 - (i) The name of the additive.
- (ii) A statement to indicate that methyl esters of conjugated linoleic acid (cis-9, trans-11 and trans-10, cis-12 octadecadienoic acids) must not be added to vitamin or mineral premixes.
- (2) The label and labeling of the additive, any feed premix, or complete feed prepared therefrom shall bear adequate directions for use.

[73 FR 64198, Oct. 29, 2008]

§ 573.640 Methyl esters of higher fatty acids.

The food additive methyl esters of higher fatty acids may be safely used in animal feeds in accordance with the following prescribed conditions:

(a) The food additive is manufactured by reaction of methyl alcohol with feed-grade fats or oils and consists of not less than 70 percent methyl esters of the following straight-chain monocarboxylic acids: Docosahexanoic acid, eicosapentanoic acid, linoleic acid, myristic acid, oleic acid, palmitic acid, palmitoleic acid, and stearic acid, and lesser amounts of the associated acid esters.